

NEW SYNONYMY IN AMERICAN BARK BEETLES (SCOLYTIDAE: COLEOPTERA)¹

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Recent opportunities to borrow types and to visit major museums in connection with a comprehensive review of North and Central American Scolytidae have resulted in the discovery of much unpublished synonymy. In order to make this information available to others and to establish a basis for names currently used in identification work, it is published here rather than to await publication of the monograph. All species treated below occur in continental America north of Panama. Following the section on generic synonymy, species are treated in alphabetical order for convenience of reference. With three exceptions, at the species level only representatives of the subfamily Hylesininae are included.

Genus *Cnemonyx* Eichhoff

Cnemonyx Eichhoff, 1868, Berliner Ent. Zeitschr. 12:150 (Type-species: *Cnemonyx galeritus* Eichhoff, monobasic).

Ceratolepsis Chapuis, 1869, Synopsis des Scolytides, p. 52 (Type-species; *Ceratolepsis jucundus* Chapuis, monobasic). *New synonymy*.

Loganius Chapuis, 1869, Synopsis des Scolytides, p. 52 (Type-species: *Loganius flavicornis* Chapuis, monobasic). *New synonymy*.

More than 20 species in this complex are now known from North and Central America and almost an equal number from South America. While the variability, particularly in the antennal club, is great, thereby giving characters of generic value in some groups, species intermediate in all generic characters abound in this genus, making it impossible to recognize more than one genus having any taxonomic meaning. The names *Ceratolepsis* Chapuis and *Loganius* Chapuis are here placed in synonymy under *Cnemonyx* Eichhoff. A more elaborate treatment of this synonymy will appear later.

Genus *Gymnochilus* Eichhoff

Gymnochilus Eichhoff, 1867, Berliner Ent. Zeitschr. 11:399 (Type-species: *Gymnochilus zonatus* Eichhoff, monobasic).

Problechilus Eichhoff, 1878, Mem. Soc. Roy. Sci. Liège (2)8:46,167 (Replacement name for *Gymnochilus* Eichhoff).

Because of supposed homonymy with *Gymnochila* Klug (1834), Eichhoff replaced his name *Gymnochilus* with *Problechilus*. Since then there has been some confusion among workers as to which name should be used for this genus. The two names differ in gender;

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consequently, both are available. For this reason the replacement name *Problechilus* is unnecessary and the senior name *Gymnochilus* should be used in its place.

Genus *Pseudothysanoes* Blackman

Pseudothysanoes Blackman, 1920, Mississippi Agric. Expt. Sta. Tech. Bull. 9:46 (Type-species: *Pseudothysanoes drakei* Blackman = *rigidus* LeConte, original designation).

Cryptocleptes Blackman, 1920 (nec Simon, 1884), Mississippi Agric. Expt. Sta. Tech. Bull. 9:51 (Type-species: *Cryptocleptes dislocatus* Blackman, monobasic). *New synonymy*.

Chalcohyus Blackman, 1943, Proc. U.S. Nat. Mus. 93:363 (Type-species: *Chalcohyus securigerus* Blackman, monobasic). *New synonymy*.

Cryptocleptes Wood, 1962, Gt. Basin Nat. 22:76 (Replacement name for *Cryptocleptes* Blackman, preoccupied).

As originally established, the genera *Pseudothysanoes* Blackman, *Cryptocleptes* Blackman, and *Chalcohyus* Blackman were easily characterized and recognized. However, about 70 species have been described in this group since then and what were once distinct groups are now nothing more than variations in one large, diverse genus. Segmentation of the antennal club varies from deeply grooved sutures marked by rows of setae to complete absence of all indications of sutures. The antennal club varies from large and broad to small and very elongate, with all degrees of variation between. The bifid protibial character used by Blackman is restricted to the female sex and may occur in some or all species of almost every species group in the genus. I see no alternative to placing *Cryptocleptes* and *Chalcohyus* in synonymy under the senior name *Pseudothysanoes*.

Aphanocleptes Wood (1960, Gt. Basin Nat. 20:63) is retained as a subgenus of *Pseudothysanoes* for those species with an exceedingly short antennal scape.

Genus *Scolytodes* Ferrari

Scolytodes Ferrari, 1867, Die Forst- und Baumzuchtsschädlichen Borkenkäfer, p. 77 (Type-species: *Scolytodes laevigatus* Ferrari, monobasic).

Hexacolus Eichhoff, 1868, Berliner Ent. Zeitschr. 11:399 (Type-species: *Hexacolus glaber* Eichhoff, monobasic). *New synonymy*.

Prionosceles Blandford, 1897, Biol. Centr. Amer., Coleopt. 4(6):177 (Two species); Hopkins, 1914, Proc. U.S. Nat. Mus. 48:128 (Type-species: *Prionosceles atratus* Blandford, subsequent designation). *New synonymy*.

The three generic names *Scolytodes* Ferrari, *Hexacolus* Eichhoff, and *Prionosceles* Blandford have long been treated as distinct. However, since their description more than a hundred species have been added to the complex and many more are awaiting description. It is now apparent that the sculpture of the pronotum grades from smooth (*Scolytodes*), through minutely asperate or tuberculate (*Prionosceles*) to finely to very coarsely asperate (*Hexacolus*) and is not usable as a generic character. There are a few species in which one sex of a species would be placed in one genus and the other sex in a

different genus if sculpture of the pronotum were the only character considered for separating genera. Similarly, the broad protibia of *Prionosceles* is developed gradually in one species group, but that character is not correlated with other characters that could be used to recognize genera.

The genus *Scolytodes*, as considered here, is a large and diverse group biologically as well as anatomically. It includes monogamous and polygamous species, phloeophagous and xylophagous species, species forming a cave-type tunnel with the larvae feeding in congress to those forming a complex radiate *Pityophthorus*-type system of galleries with individual larval mines, and many other variations. However, in this diversity of habits I presently see no correlation with anatomical structure that would support the subdivision of the group on any natural lines. Therefore, *Hexacolus* and *Prionosceles* are here placed in synonymy under the senior name *Scolytodes*.

Chaetophloeus coronatus (Chapuis), n. comb.

Phloeosinus coronatus Chapuis, 1869, Synopsis des Scolytides, p. 39 (Holotype, male; Yucatan, Mexico; Brussels Mus.).

The unique holotype of this species was examined and found to represent a species of *Chaetophloeus* near *brasiliensis* Blackman.

Chaetophloeus heterodorus (Casey)

Renocis heterodoxus Casey, 1886, California Acad. Sci. Bull. 6:258 (Holotype, male; Reno, Nevada; U.S. Nat. Mus.).

Renocis brunneus Blackman, 1940, Proc. U.S. Nat. Mus. 88:389 (Holotype, female; Cloudcroft, New Mexico; U.S. Nat. Mus.). *New synonymy*.

Renocis fuscus Blackman, 1940, Proc. U.S. Nat. Mus. 88:391 (Holotype, female; Williams, Arizona; U.S. Nat. Mus.). *New synonymy*.

Renocis commixtus Blackman, 1940, Proc. U.S. Nat. Mus. 88:392 (Holotype, female; Williams, Arizona; U.S. Nat. Mus.). *New synonymy*.

This species occurs from Manitoba to western Texas westward to the Pacific Coast in numerous species of shrubs. The holotypes, paratypes, and more than 200 other specimens of *heterodoxus* Casey, *brunneus* Blackman, *fuscus* Blackman, and *commixtus* Blackman were examined. Only one species is represented by this material. Blackman's three names, therefore, are here placed in synonymy under *heterodoxus* (Casey).

Chaetophloeus mexicanus (Blackman)

Renocis mexicanus Blackman, 1940, Proc. U.S. Nat. Mus. 88:397 (Holotype, female; Guadalajara, Jalisco, Mexico; U.S. Nat. Mus.).

Renocis mexicanus Eggers, 1950 (nec Blackman, 1940), Ent. Blätt. 45-46:149 (Holotype, evidently a male; Mexico; Schedl Coll.). *New synonymy*.

The holotype of *mexicanus* Eggers was examined and found to be in very poor condition. However, since *mexicanus* Blackman is the only known species of this size having two pairs of submarginal crenulations at the bases of the elytra, it is reasonably certain they

are synonyms. The size, body proportions, and general surface sculpture are the same. All setae are completely abraded on Egger's type.

Chramesus asperatus Schaeffer

Chramesus asperatus Schaeffer, 1908, J. New York Ent. Soc. 16:220 (Syntypes; Chiricahua Mts., Arizona; U.S. Nat. Mus.); Blackman, 1928, J. Washington Acad. Sci. 28:539 (Lectotype, female).

Chramesus gibber Blackman, 1938, J. Washington Acad. Sci. 28:541 (Holotype, female; Cloudcroft, New Mexico; U.S. Nat. Mus.). *New synonymy*.

The lectotype and male lectoallotype of *asperatus* Schaeffer and the holotype and male allotype of *gibber* Blackman were compared directly to one another and to long series from Cloudcroft, New Mexico, and from the Chiricahua Mountains, Arizona. It is now clear that the differences are not as great as described by Blackman and that they fall well within the limits of variation in this abundant species.

Chramesus pumilus Chapuis

Rhopalopleurus pumilus Chapuis, 1869, Synopsis des Scolytides, p. 47 (Holotype, male; Teapa, Tabasco, Mexico; Brussels Mus.).

Chramesus tumidulus Blandford, 1897, Biol. Centr. Amer., Coleopt. 4(6):170 (Lectotype, female; Las Mercedes, Guatemala; British Mus. Nat. Hist., present designation). *New synonymy*.

Chramesus panamensis Blackman, 1943, Proc. U.S. Nat. Mus. 94:391 (Holotype, female; Panama Canal Zone; U.S. Nat. Mus.). *New synonymy*.

Chramesus mexicanus Schedl, 1949, Rev. Brasil Biol. 9:264 (Holotype, female; Comitán, Chiapas, Mexico; Schedl Coll.). *New synonymy*.

From the two syntypes in Blandford's type series, I here designate the female from Las Mercedes, Guatemala, as the lectotype of *tumidulus* Blandford. This lectotype and the holotypes of *pumilus* Chapuis and *mexicanus* Schedl, and the entire type series of *panamensis* Blackman were compared directly to specimens in my collection.

They all definitely represent the same, abundant, widely distributed, easily recognized species. It breeds in *Canavalia villosa* from central Mexico to Panama.

Chramesus subopacus Schaeffer

Chramesus subopacus Schaeffer, 1908, J. New York Ent. Soc. 16:22 (Syntypes; Huachuca Mts., Arizona; Brooklyn Mus. and U.S. Nat. Mus.); Blackman, 1938, J. Washington Acad. Sci. 28:541 (Lectotype, female; U.S. Nat. Mus.).

Chramesus canus Blackman, 1938, J. Washington Acad. Sci. 28:541 (Holotype, female; Tallulah, Louisiana; U.S. Nat. Mus.). *New synonymy*.

Lectotype and paralectotypes of *subopacus* Schaeffer were compared directly to the holotype, allotype, and paratype of *canus* Blackman and with other specimens from Texas to Honduras. They all represent the same easily recognized species. Blackman's name must therefore be placed in synonymy.

Cnesinus costulatus Blandford

Cnesinus costulatus Blandford, 1896, Biol. Centr. Amer., Coleopt. 4(6):137 (Lectotype, female; Volcan de Chiriqui, Chiriqui, Panama; British Mus. Nat. Hist.).

Cnesinus similis Blackman, 1943, Proc. U.S. Nat. Mus. 94:375 (Holotype, female; Porto Bello, Panama; U.S. Nat. Mus., 56552). *New synonymy*.

From the six specimens remaining in the British Museum (Natural History) of Blandford's nine syntypes, I have selected and here designate the first, from Volcan de Chiriqui, as the lectotype of *Cnesinus costulatus* Blandford. The lectotype was compared to my homotypes from Pandora, Limon Prov., Costa Rica, and these to the holotype of *similis* Blackman. All represent the same species.

Cnesinus gracilis Blandford

Cnesinus gracilis Blandford, 1896, Biol. Centr. Amer., Coleopt. 4(6):141 (Holotype, female; Volcan de Chiriqui, Chiriqui, Panama; British Mus. Nat. Hist.).

Cnesinus substrigatus Blackman, 1943, Proc. U.S. Nat. Mus. 94:376 (Holotype, female; Santander, Colombia; U.S. Nat. Mus.). *New synonymy*.

The female holotypes of both *gracilis* Blandford and *substrigatus* Blackman were compared to females from Finca Gromaco, Puntarenas Prov., Costa Rica, and were found to be identical. In all, 40 specimens of this species from Honduras to Colombia were examined.

Cnesinus setulosus Blandford

Cnesinus setulosus Blandford, 1896, Biol. Centr. Amer., Coleopt. (Lectotype, male; Tole, Chiriqui, Panama; British Mus. Nat. Hist., present designation).

Cnesinus flavopilosus Schedl, 1940, An. Esc. Nac. Cienc. Biol., Mexico 1:333 (Holotype, sex?; Comitán, Mexico; Schedl Coll.). *New synonymy*.

Cnesinus panamensis Blackman, 1943, Proc. U.S. Nat. Mus. 94:372 (Holotype, male; Panama; U.S. Nat. Mus.). *New synonymy*.

Cnesinus cognatus Blackman, 1943, Proc. U.S. Nat. Mus. 94:372 (Holotype, female; El Peten Prov., Guatemala; U.S. Nat. Mus.). *New synonymy*.

This is a highly variable species in which no two series of the 57 specimens examined were exactly alike. Specimens from Mexico are rather strikingly different from some of those from Panama; however, series taken from Guatemala and Honduras appear to completely bridge any suggested gap between them. Representatives of my Esquintla, Guatemala, series were compared by Schedl to his type of *flavopilosus*; my Olanchito, Honduras, male homotype was compared directly to the holotype of *panamensis* Blackman; and another Olanchito, Honduras, female homotype was compared directly to the holotype of *cognatus* Blackman. All of these specimens were compared directly to the three male syntypes of *setulosus* Blandford. There is no doubt as to the synonymy of *setulosus*, *cognatus*, and *panamensis*.

Occasional Panama specimens have the eyes more widely separated and the pronotum less strongly strigose with the punctures

more isolated than do specimens from Mexico. Other Panama specimens and those from intermediate areas tend to be intermediate in one or both characters. It appears that only one species can be recognized in this material.

From Blandford's series of three male syntypes, I here designate the first, from Tole, Chiriqui, Panama, as the lectotype of *Cnesinus setulosus* Blandford.

Eupagiocerus dentipes Blandford

Eupagiocerus dentipes Blandford, 1897, Biol. Centr. Amer., Coleopt. 4(6):133 (Lectotype, male; El Tumbador, Guatemala; British Mus. Nat. Hist., present designation).

Eupagiocerus clarus Wood, 1965, Gt. Basin Nat. 25:33 (Holotype, female; Rio Viejo, Volcan de Chiriqui, Chiriqui, Panama; Wood Coll.). *New synonymy*.

From the three male syntypes in Blandford's series, I here designate the first, from El Tumbador, as the lectotype of *Eupagiocerus dentipes* Blandford. These three callow males were compared to black females of *clarus* Wood, in 1964, and found to differ in several respects. Later, when sexual differences were found and callow males from Costa Rica were compared to the syntypes, the synonymy was obvious.

Hylastes gracilis LeConte

Hylastes gracilis LeConte, 1868, Trans. Amer. Ent. Soc. 2:174 (Lectotype, female; Tahoe Valley, California; Mus. Comp. Zool., 958, present designation).

Hylastes vastans Chapuis, 1869, Synopsis des Scolytides, p. 17 (Holotype, female; Mexico; Brussels Mus.). *New synonymy*.

Hylastes nitidus Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Bull. 14(1): 19 (Holotype, female?; Near Hot Springs, Las Vegas, New Mexico; Canadian Nat. Coll., 9246). *New synonymy*.

The types of *gracilis* LeConte, *vastans* Chapuis, and *nitidus* Swaine were all examined and compared directly to several specimens in my collection. All definitely fall within the limits of this somewhat variable species. While a majority of the specimens from a given geographical location were easily recognized as belonging to this species, occasional specimens exhibit frontal or perhaps other characters that are somewhat different. It is only through the examination of several series from such an area that complete intergradation between these aberrant individuals and the main population is observed. In view of this, the names *vastans* and *nitidus* are here placed in synonymy under the older name *gracilis*. The first specimen, a female, of LeConte's two syntypes is here designated as the lectotype.

Hylastes porculus Erichson

Hylastes porculus Erichson, 1836, Archiv Naturgesch. 2:49 (Pennsylvania: Berlin Zool. Mus.).

Hylastes swainei Eggers, 1934, Ent. NachrBl. 8:25 (Holotype, male; Frater, Ontario; U.S. Nat. Mus., 59125); Schedl, 1952, Ent. Blatt. 47-48:159.

Hylastes webbi Blackman, 1941, U.S. Dept. Agric. Misc. Pub. 417:10 (Holotype, female; Elmore, South Dakota; U.S. Nat. Mus.). *New synonymy*.

Hylastes canadensis Blackman, 1941, U.S. Dept. Agric. Misc. Pub. 417:15 (Holotype, female; Aweme, Manitoba; U.S. Nat. Mus.). *New synonymy*.

The Eichhoff specimen of *porculus* Erichson in the U.S. National Museum collection, used as the basis for this species for Blackman's (1941) revision of *Hylastes*, was compared to the holotypes of *webbi* Blackman, *canadensis* Blackman, and *swainei* Eggers and to selected specimens of *porculus* from eastern North America. Following the analysis of 168 specimens from throughout its range and the study of the types, it is apparent that only one species is represented. The names *webbi* Blackman, *canadensis* Blackman, and *swainei* Eggers are here placed in synonymy under the senior name *porculus* Erichson.

In Blackman's revision of the genus, *swainei* was placed in synonymy under *porculus*, although he saw no type material. Later, Schedl (1952), apparently on the basis of a study of two cotypes, proposed that the name be removed from synonymy. This action, as indicated above, was in error.

Hylastes tenuis Eichhoff

Hylastes tenuis Eichhoff, 1868, Berliner Ent. Zeitschr. 12:147 (Holotype, sex?; Amerique Boreale; evidently lost with Hamburg Mus.).

Hylastes pusillus Blackman, 1941, U.S. Dept. Agric. Misc. Pub. 417:23 (Holotype, female; Florida; U.S. Nat. Mus.). *New synonymy*.

Hylastes parvus Blackman, 1941, U.S. Dept. Agric. Misc. Pub. 417:24 (Holotype, female; Williams, Arizona; U.S. Nat. Mus.). *New synonymy*.

Hylastes minutus Blackman, 1941, U.S. Dept. Agric. Misc. Pub. 417:25 (Holotype, female; Lake Tahoe, Nevada; U.S. Nat. Mus.). *New synonymy*.

The type of *tenuis* Eichhoff was compared by J. M. Swaine to his homotypes that are identical to several specimens in my collection. These in turn were compared directly to the holotypes of *pusillus* Blackman, *parvus* Blackman, and *minutus* Blackman. Following my examination of more than 323 specimens, it is apparent that approximately two-thirds of the specimens from the Atlantic Coast states exhibit a median, impressed, often shining line on the frons; many of these are indistinguishable from the European *attenuatus* Erichson. Material from Louisiana rarely possessed this character, although it was present in the population; it was absent in material from the Western States. The features described by Blackman to distinguish *pusillus*, *parvus*, and *minutus* appear to be normal variations within a series. Therefore, only one species is recognized for the four names mentioned here.

Hylurgops planirostris (Chapuis)

Hylastes planirostris Chapuis, 1869, Synopsis des Scolytides, p. 21 (Lectotype, female; Suapan, Mexico; Brussels Mus.).

Hylurgops knausi Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Bull. 14(1): 17 (Lectotype, female?; Cloudercroft, New Mexico; Canadian Nat. Coll., 9243). *New synonymy*.

From the four Chapuis syntypes in the Brussels Museum I here designate the first, a female from "Suapan," Mexico, as the lectotype of *Hylastes planirostris* Chapuis. These syntypes were compared to my homotypes of *Hylurgops knausi* Swaine and found to be identical. Swaine's name, therefore, is here placed in synonymy.

Hylurgops porosus (LeConte)

Hylastes porosus LeConte, 1868, Trans. Amer. Ent. Soc. 2:175 (Lectotype, female?; California; Mus. Comp. Zool., 957); Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Bull. 14(1):16 (Removed second syntype from species).

Hylurgops lecontei Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Bull. 14(1):16 (Holotype, female?; Colorado; Canadian Nat. Coll., 9242). *New synonymy*.

The types of both *porosus* LeConte and *lecontei* Swaine were examined and compared directly to one another and to several of my homotypes. After a complete review of this genus, in which several hundred specimens were examined, it is now clear that only one species is represented by these two names.

Leperisinus californicus Swaine

Leperisinus californicus Swaine, 1916, Canadian Ent. 48:190 (Holotype, female; San Diego, California; Canadian Nat. Coll., 9249).

Leperisinus hoferi Blackman, 1943, Proc. U.S. Nat. Mus. 94:394 (Holotype, female; Sabino Canyon, Arizona; U.S. Nat. Mus., 56573). *New synonymy*.

Leperisinus californicus Essig, 1957, Insects and mites of western North America, p. 519 (*nomen nudum*).

The holotypes of *californicus* Swaine and *hoferi* Blackman were examined and compared to specimens in my collection; they represent only one species. This species is now known to occur from North Dakota and Oklahoma west to Washington and California, and south to Chihuahua. Due to an unfortunate error, Essig designated a new species, *californicus*, in his book cited above, but a description was not included nor was a type designated.

Phloeosinus cristatus (LeConte)

Hylesinus cristatus LeConte, 1868, Trans. Amer. Ent. Soc. 2:169, 170 (Holotype, female; California; Carnegie Mus.).

Phloeosinus cristatus: LeConte, 1876, Proc. Amer. Philos. Soc. 15:381.

Phloeosinus chiricahua Blackman, 1942, Proc. U.S. Nat. Mus. 92:444 (Holotype, male; Chiricahua National Monument, Arizona; U.S. Nat. Mus., 55407). *New synonymy*.

Blackman divided this taxon into two species based on differences in the sculpture of the discal interstriae, on the impression of the sutural striae on the declivity, on the vestiture, and on the disjunct distributions. The material at hand, from Palo Alto, California, and Sedona, Arizona, has the character of the discal interstriae the reverse of that reported by Blackman; the second and third characters I am unable to detect, and a lack of collecting probably is responsible

for the apparent disjunct distributions. The differences in the discal interstriae are so slight and variable that separate species or even geographical races cannot be recognized from the material presently available for study. Until more substantial evidence is available I refer *chiricahua* Blackman to synonymy under *cristatus* (LeConte).

Phloeosinus cupressi Hopkins

Phloeosinus cupressi Hopkins, 1903, U.S. Bur. For. Bull. 38:35 (Holotype, male; Golden Gate Park, San Francisco, California; U.S. Nat. Mus., 55406).

Phloeosinus nitidus Swaine, 1924, Canadian Ent. 56:145 (Holotype, male; Santiam Nat. For., Oregon; Canadian Nat. Coll., 730). *New synonymy*.

Phloeosinus blackwelderi Blackman, 1943, Proc. U.S. Nat. Mus. 94:397 (Holotype, male; Ciricito, Canal Zone, Panama; U.S. Nat. Mus., 56576). *New synonymy*.

The holotypes of *cupressi* Hopkins, *nitidus* Swaine, and *blackwelderi* Blackman were all examined and were compared to my homotypes and to several additional specimens. A total of 166 specimens were examined from all parts of the known distribution. It is apparent that Blackman divided this species into two allopatric species on the Pacific Coast of North America, defined by differences in host, by supposedly smoother lateral interstriae, and by sinuate striae in the northern race. The discal interstriae of the northern race tend to be more coarsely, closely crenulate in specimens from Washington but finer in those from Alaska. The other characters vary about equally within series from both northern and southern areas. No character, except host, is sufficiently constant to be recognized in more than half of the available material. For these reasons, until reliable biological or other characters are found that will support a division, I must recognize only one species.

Blackman evidently failed to recognize the possibility of this species being introduced into Panama and described specimens from there as a distinct species. They are normal southern representatives of this species.

Phloeosinus fulgens Swaine

Phloeosinus fulgens Swaine, 1924, Canadian Ent. 56:147 (Holotype, male; Northfork, California; Canadian Nat. Coll., 732).

Phloeosinus splendens Blackman, 1942, Proc. U.S. Nat. Mus. 92:428 (Holotype, male; Pinehurst, Oregon; U.S. Nat. Mus., 55402). *New synonymy*.

Blackman erected *splendens* on the basis of a more uniformly granulate-punctate frons; of larger, more widely spaced pronotal punctures; of wider declivital interstriae 2; and of color differences. Following the examination of his type series, of the U.S. National Museum series of *fulgens*, and of material in my collection, including several homotypes, it is apparent that characters on which *splendens* was based are minute, obscure, and not consistently represented in specimens under either name in the material studied by Blackman. For these reasons the name *splendens* Blackman must be placed in synonymy under *fulgens* Swaine.

Phloeosinus hoppingi Swaine

Phloeosinus hoppingi Swaine, 1915, Canadian Ent. 47:364 (Lectotype, female; Camp 6, California; Canadian Nat. Coll., 6084).

Phloeosinus woodi Bright, 1966, Pan-Pacific Ent. 42:296 (Holotype, male; Cypress Camp near Hat Creek, Shasta Co., California; Wood Coll.). *New synonymy*.

My lectohomotypes of *hoppingi* Swaine, the holotype, allotype, and 30 paratypes of *woodi* Bright, and 48 other specimens were studied. Because of the slightly larger average size, I had not previously compared the *woodi* type series to *hoppingi*. There are no significant differences between the two; therefore, only one species is recognized.

Phloeosinus pini Swaine

Phloeosinus pini Swaine, 1915, Canadian Ent. 47:362 (Lectotype, female; Riding Mountains, Manitoba; Canadian Nat. Coll., 6083).

Phloeosinus alaskanus Blackman, 1942, Proc. U.S. Nat. Mus. 92:409 (Holotype, male; Eagle, Alaska; U.S. Nat. Mus., 55396). *New synonymy*.

The holotypes of both *pini* Swaine and *alaskanus* Blackman were examined and compared directly to some of my specimens. Series of specimens were examined from Alaska, Northwest Territories, Manitoba, Michigan, and Quebec—all taken from *Picea glauca* except for the type series of *pini* that was taken in *Pinus banksiana*. The minute differences on which *alaskanus* was based can be found as individual points of variation in a long series. Only one species can be recognized among the 84 specimens examined.

Phloeosinus punctatus LeConte

Phloeosinus punctatus LeConte, 1876, Proc. Amer. Philos. Soc. 15:382 (Lectotype, female; blue disk signifying Oregon; Mus. Comp. Zool., 978).

Phloeosinus rubicundulus Swaine, 1924, Canadian Ent. 56:144 (Holotype, female; Hossack Meadows, Tulare Co., California; Canadian Nat. Coll., 729). *New synonymy*.

Phloeosinus chamberlini Blackman, 1942, Proc. U.S. Nat. Mus. 92:470 (Holotype, male; Alturas, California; U.S. Nat. Mus., 55415). *New synonymy*.

This variable, polyphagous, abundant species is not easily recognized. After studying several hundred specimens from British Columbia to California, and after studying the type series of *punctatus* LeConte, *rubicundulus* Swaine, and *chamberlini* Blackman, I have very reluctantly concluded that only one species is represented by these names. The elytral vestiture is easily abraded, and its variability is determined more by beetle activity than by distribution or genetics.

Phloeosinus scopulorum neomexicanus Blackman

Phloeosinus neomexicanus Blackman, 1942, Proc. U.S. Nat. Mus. 92:460 (Holotype, male; Vermejo, New Mexico; U.S. Nat. Mus., 55412).

Phloeosinus texanus Blackman, 1942, Proc. U.S. Nat. Mus. 92:462 (Holotype, male; Montell, Uvalde Co., Texas; U.S. Nat. Mus., 55413). *New synonymy*.

Following the examination of 201 specimens from British Columbia to Texas and the holotypes of *scopulorum* Swaine, *neomexicanus* Blackman, and *texanus* Blackman, it was determined that Blackman's two names were based on exceedingly minute characters that do not distinguish populations in the field. They are therefore synonyms. Because of the lack of material available for study from Nevada, Idaho, and Oregon, *neomexicanus* is recognized as a distinct subspecies from *scopulorum*, although its validity is seriously questioned. Additional collecting will clarify its status.

Phloeosinus serratus (LeConte)

- Hylesinus serratus* LeConte, 1868, Trans. Amer. Ent. Soc. 2:169, 170 (Holotype, male; pink disk signifying "Middle States"; Mus. Comp. Zool., 977).
Phloeosinus serratus: LeConte, 1876, Proc. Amer. Philos. Soc. 15:381.
Phloeosinus utahensis Swaine, 1915, Canadian Ent. 47:363 (Lectotype, female; Stockton, Utah; Canadian Nat. Coll., 6087). *New synonymy*.
Phloeosinus juniperi Swaine, 1917, Dom. Canada Dept. Agric. Ent. Br. Bull. 14(1):10 (Lectotype, female; Scaffold Meadow, Tulare Co., California; Canadian Nat. Coll., 9257). *New synonymy*.
Phloeosinus aciculatus Bruck, 1931, Pan-Pacific Ent. 7:127 (Holotype, male; Chiricahua Mts., Arizona; California Academy of Sciences).

The types of *serratus* LeConte, *utahensis* Swaine, *juniperi* Swaine, and *aciculatus* Bruck were examined as well as the allotypes of Swaine's species and more than 200 specimens from Washington to Texas and Durango. The identity of *serratus* long remained a mystery because the male declivital interstriae 3 on the holotype included more teeth than is normal for this species. With more material now available the variation seen in LeConte's type is recognized as a moderately common variant in large series from New Mexico and western Texas. Presumably due to the paucity of specimens available for study from intermediate localities, three synonyms have been named from widely separated parts of its distribution, based on minor, variable characters. Based on the material available I see no possibility of recognizing geographical races, although occasional specimens may superficially appear to be strikingly different. The name *serratus* LeConte has priority over the names of Swaine and Bruck.

Phloeotribus asperatus Blandford

- Phloeotribus asperatus* Blandford, 1897, Biol. Centr. Amer., Coleopt. 4(6):166 (Holotype, male; Panajachel, Guatemala; British Mus. Nat. Hist.).
Phloeotribus sodalis Blandford, 1897, Biol. Centr. Amer., Coleopt. 4(6):168 (Lectotype, male; Cerro Zunil, Guatemala; British Mus. Nat. Hist.). *New synonymy*.

This very abundant species occurs in Central America from Guatemala to Costa Rica and in northern South America in *Celtis*, *Croton*, *Cedrela*, *Ficus*, *Hibiscus*, and perhaps many other host species. Following the examination of 260 specimens, including the type series of both *asperatus* Blandford and *sodalis* Blandford, I am

able to recognize only one species. The name *asperatus* has page priority; *sodalis* is placed in synonymy under it. Since *sodalis* was based on a syntypic series of three specimens, I here designate the first, a male from Cerro Zunil, as the lectotype of *sodalis* Blandford.

This species and *armatus* Blandford were mixed by Blandford, and specimens of both were placed under both names.

Phloeotribus frontalis (Olivier)

Scolytus frontalis Olivier, 1795, Entomologie, Coleopt. 4(78):13 (Type?; Amerique septentrionale).

Phloeophthorus moriperda Hopkins, 1907 (1905 preprint), Proc. Ent. Soc. Washington 7:77 (Lectotype, female; Irapuato, Guanajuato, Mexico; U.S. Nat. Mus.). *New synonymy*.

Two specimens of *Phloeophthorus granicollis* Eichhoff, presumed to be cotypes, were compared to specimens in my collection. *Eichhoff* (1896, Proc. U.S. Nat. Mus. 18:608) established the synonymy of his species with *frontalis* (Olivier). My specimens were compared to the male and female syntypes of *moriperda* Hopkins and were found to represent the same species. Hopkins' name, therefore, is placed in synonymy. The female syntype is here designated as the lectotype of *moriperda* Hopkins.

Phloeotribus liminaris (Harris)

Tomicus liminaris Harris, 1852, A treatise on some insects injurious to vegetation, p. 79 (Holotype, female; New England; Mus. Comp. Zool., 26428).

Phthorophloeus mississippiensis Blackman, 1921, Mississippi Agric. Expt. Sta. Tech. Bull. 10:4 (Lectotype, female; Agricultural College, Mississippi; U.S. Nat. Mus.). *New synonymy*.

Blackman described *mississippiensis* from a series of 26 specimens and referred to types and paratypes. Because he did not clearly designate a type, I here designate the female on which his description was based, and which he labeled as the type, to be the lectotype of *mississippiensis* Blackman. His type series was compared to my homotypes of *liminaris* and found to represent the same species. Blackman's name, therefore, is placed in synonymy.

Pseudothysanoes sedulus Blackman

Pseudothysanoes sedulus Blackman, 1928, New York Coll. For., Syracuse, Tech. Bull. 25:204 (Holotype, male; Bear Canyon, Catalina Mts., Arizona; U.S. Nat. Mus.).

Pseudothysanoes gambetti Blackman, 1928, New York Coll. For., Syracuse, Tech. Bull. 25:205 (Holotype, male; Peloncillo Reserve, New Mexico; U.S. Nat. Mus.). *New synonymy*.

Pseudothysanoes barberi Blackman, 1928, New York Coll. For., Syracuse, Tech. Bull. 25:206 (Holotype, male; Williams, Arizona; U.S. Nat. Mus.). *New synonymy*.

The type series, including holotypes, of *sedulus* Blackman, *gambetti* Blackman, and *barberi* Blackman, and additional material totaling 155 specimens were compared directly. Blackman's names were

based only upon individual variations in short series that do not characterize species. For this reason *gambetti* and *barberi* are here placed in synonymy under *sedulus*, based on page priority.

Scolytodes glabrescens, n. n.

Prionosceles glaber Wood, 1961 (nec Eichhoff, 1867), Gt. Basin Nat. 21:102 (Holotype, male; Summit, Canal Zone, Panama; U.S. Nat. Mus.). *Preoccupied*.

Because of the transfer of *Hexacolus glaber* Eichhoff (1867, Berliner Ent. Zeitschr. 11:400) and of *Prionosceles glaber* Wood to *Scolytodes* Ferrari, resulting from action reported above, the latter species became a junior homonym and must be replaced. The new name *Scolytodes glabrescens* is proposed to replace the preoccupied name *Scolytodes glaber* (Wood).

Scolytodes glaberrimus, n. n.

Scolytodes glaber Eggers, 1943 (nec Eichhoff, 1867), Mitt. Münchner Ent. Ges. 33:360 (Male and female syntypes; Cochabamba, Bolivia; Paris Mus.). *Preoccupied*.

The transfer of *Hexacolus glaber* Eichhoff, cited above, to *Scolytodes* Ferrari, resulting from action reported above, made a junior homonym of *Scolytodes glaber* Eggers and a new name is required. The new name *Scolytodes glaberrimus* is proposed to replace it.